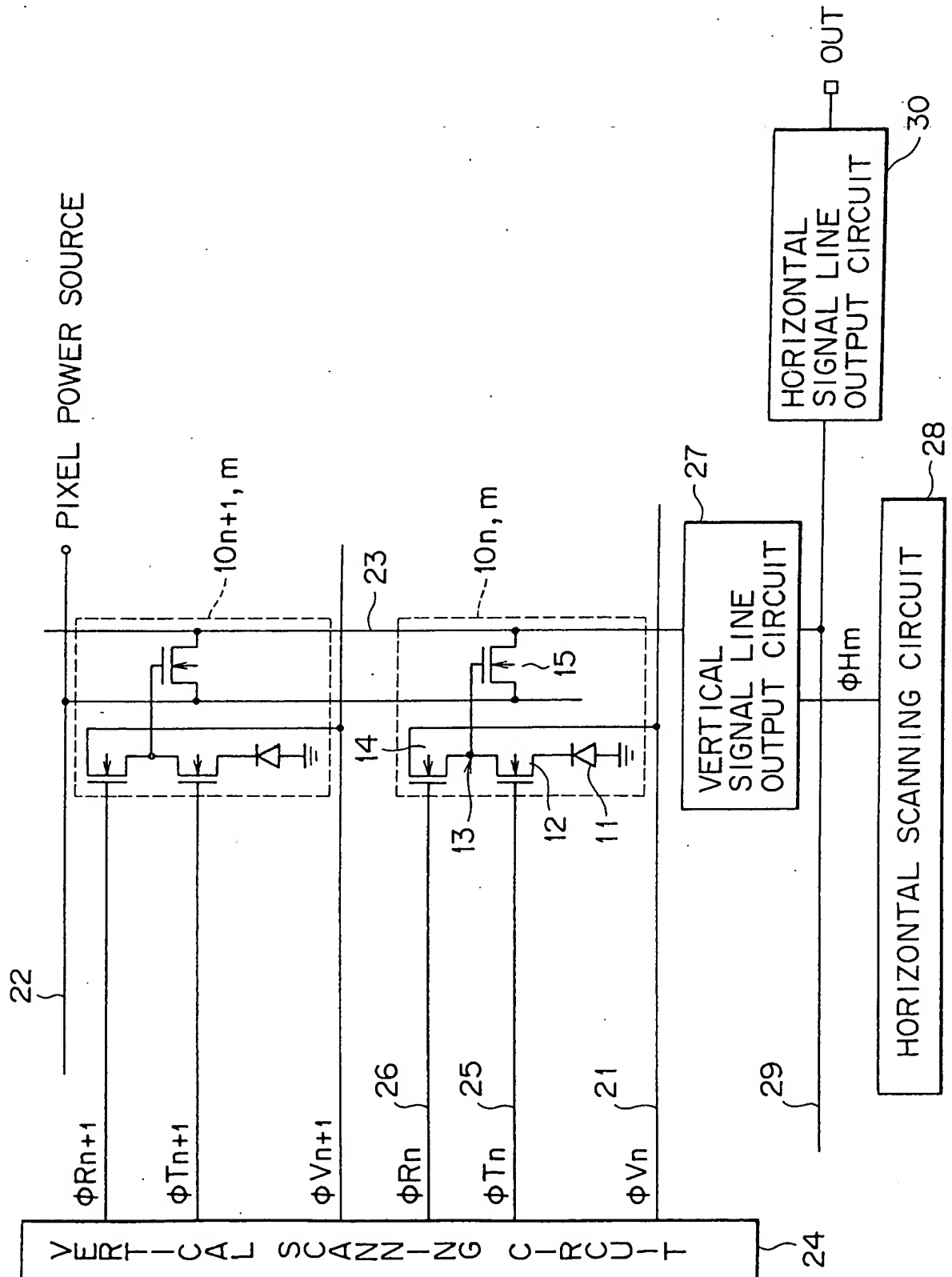


FIG. 1



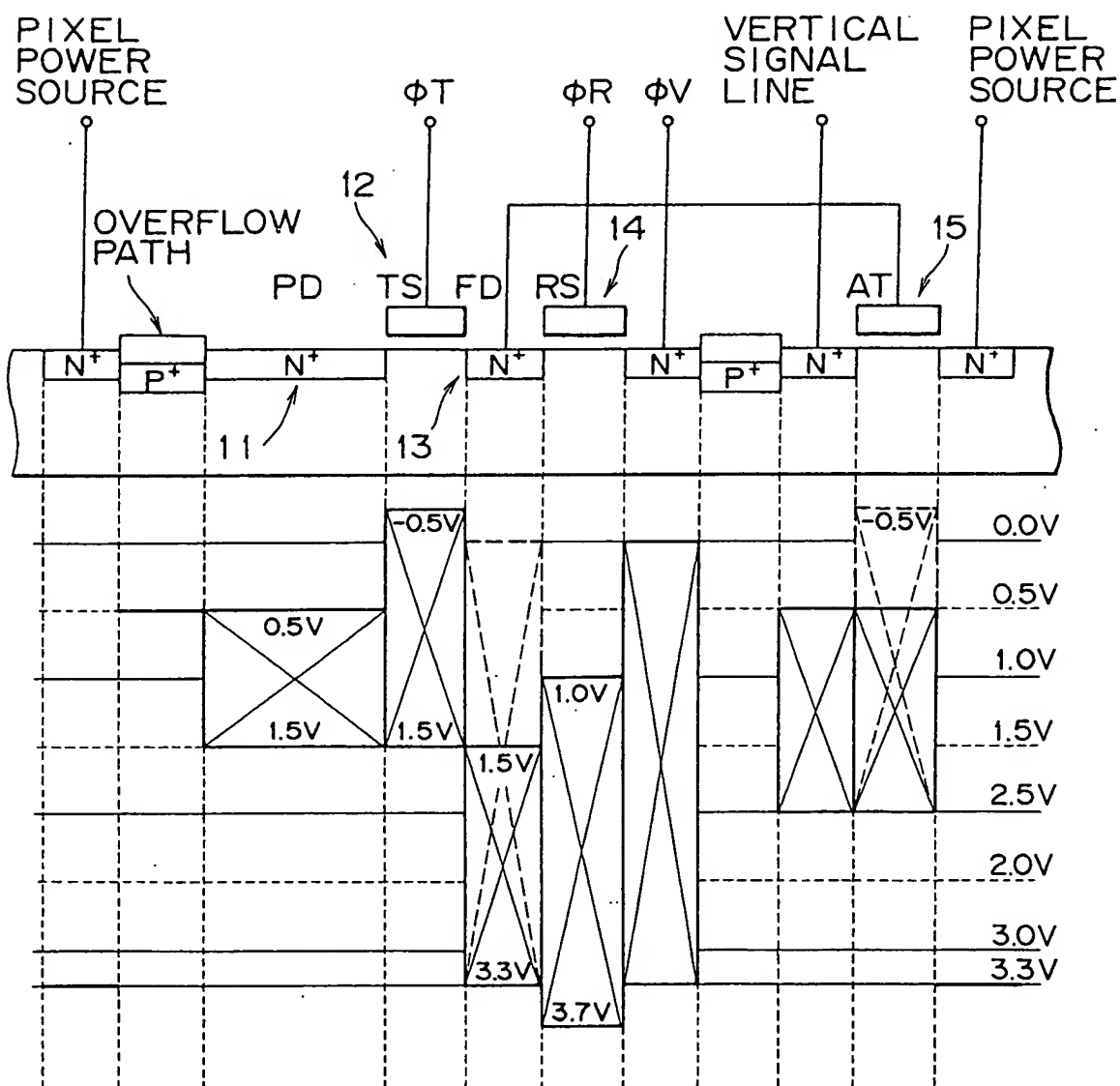
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FIG. 2

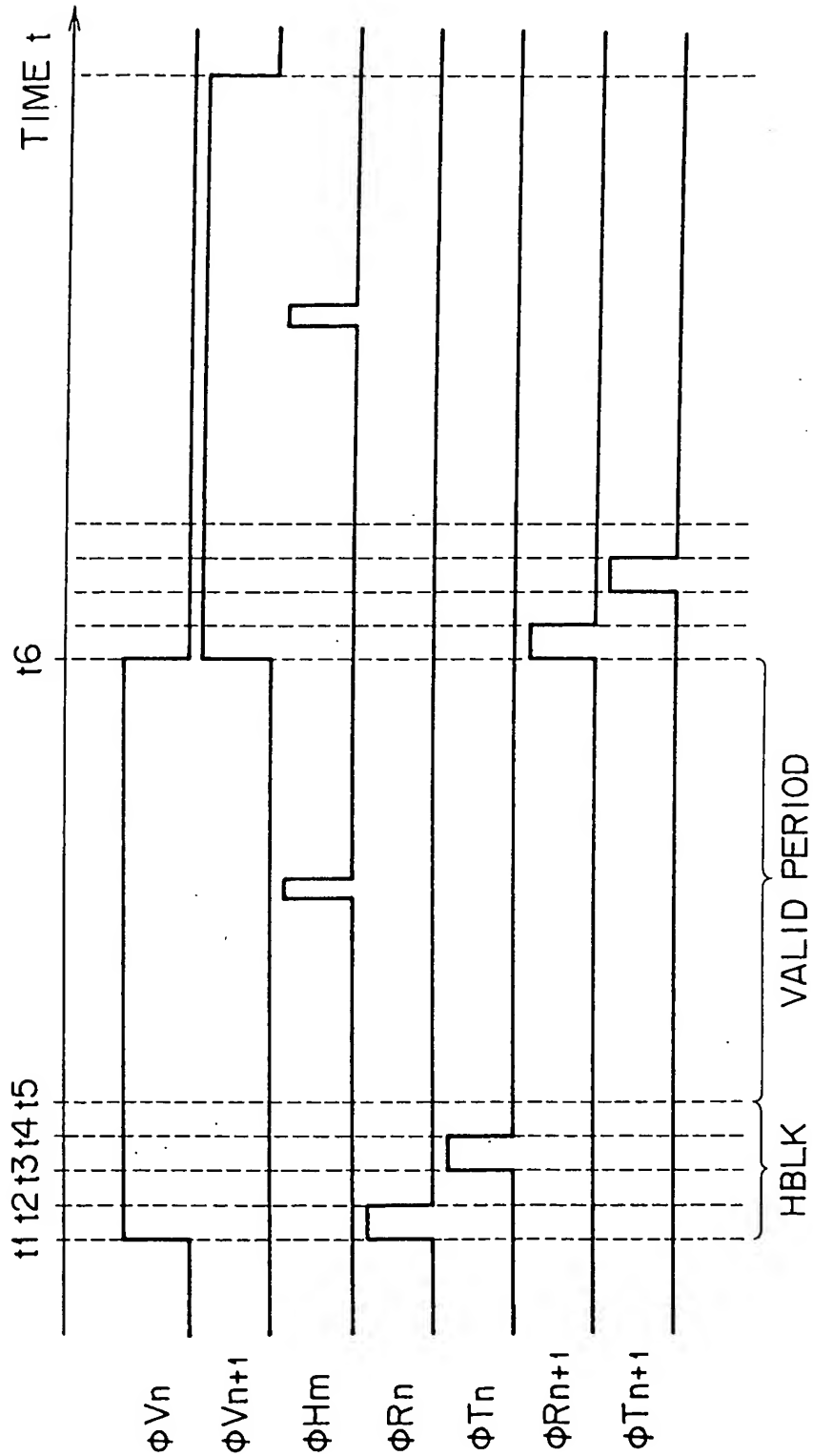


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FIG. 3



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FIG. 4A  $t < t_1$  NON-SELECTION STATE

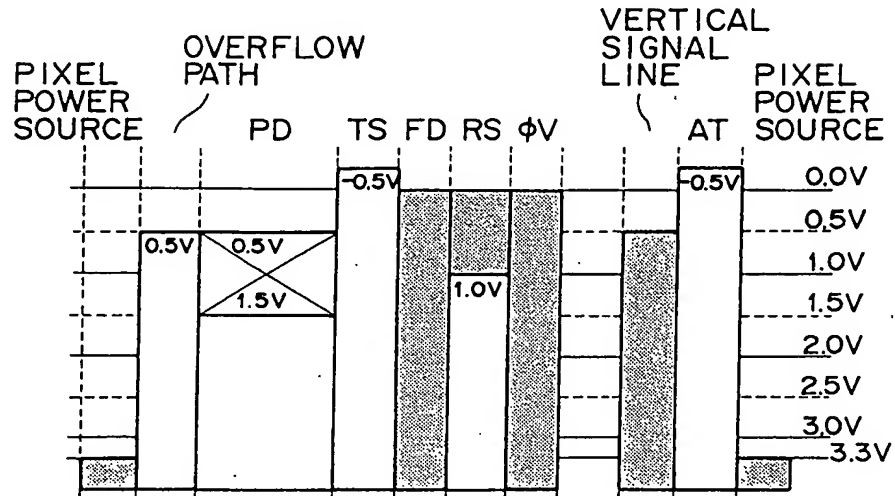


FIG. 4B  $t_1 < t < t_2$  FD RESET

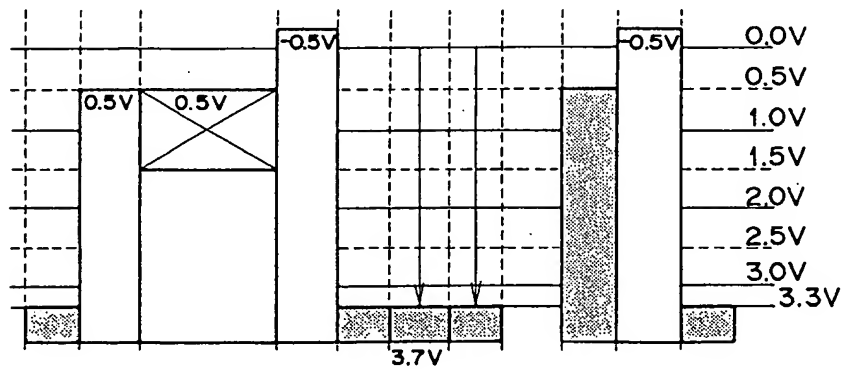


FIG. 4C  $t_2 < t < t_3$  OFFSET LEVEL (NOISE LEVEL) READ-OUT

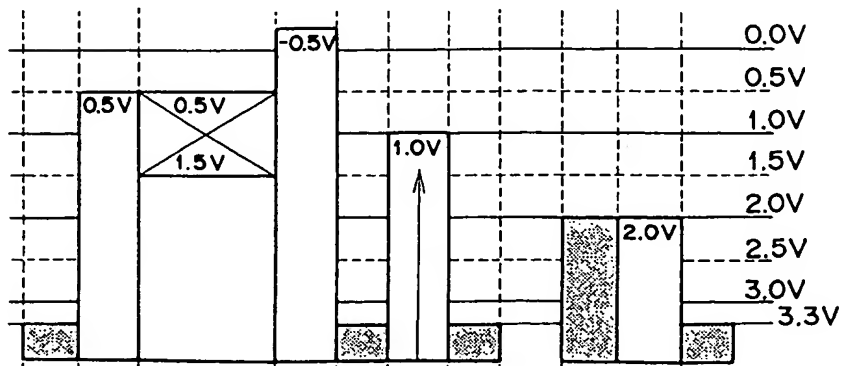


FIG. 5A  $t_3 < t < t_4$  TRANSFER OF SIGNAL CHARGE FROM PD TO FD

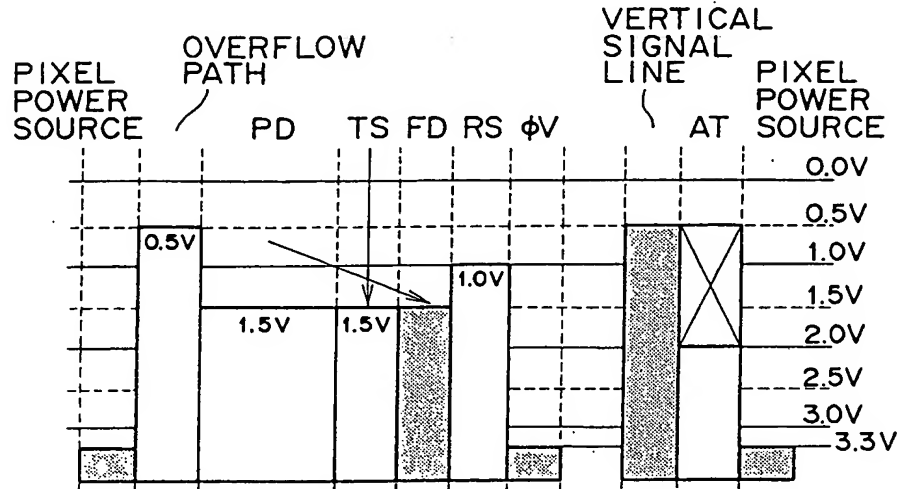


FIG. 5B  $t_4 < t < t_5$  SIGNAL LEVEL READ-OUT

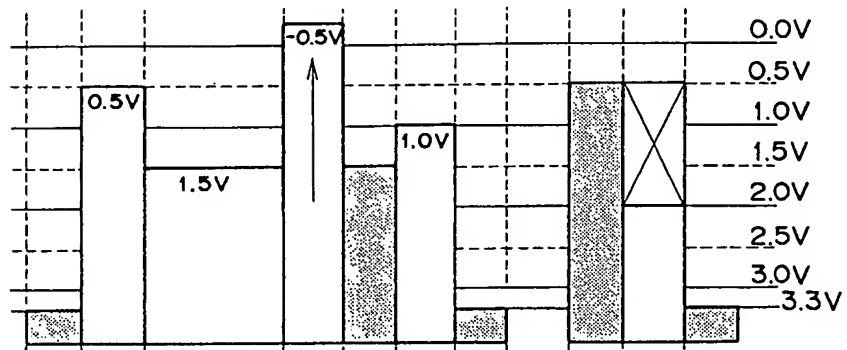


FIG. 5C  $t_6 < t$  NON-SELECTION STATE

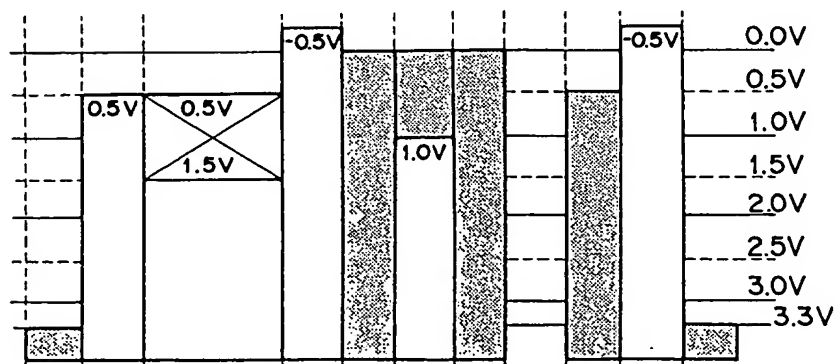
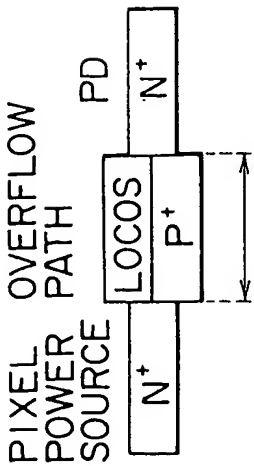
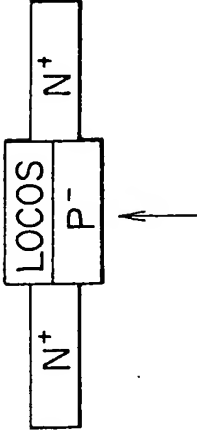


FIG. 6A



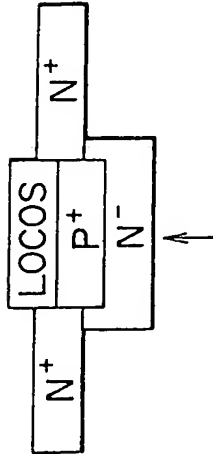
THE DISTANCE IS REDUCED

FIG. 6B



THE DENSITY OF P REGION OF CHANNEL STOP IS REDUCED

FIG. 6C



N- REGION IS POSITIVELY FORMED

FIG. 6D

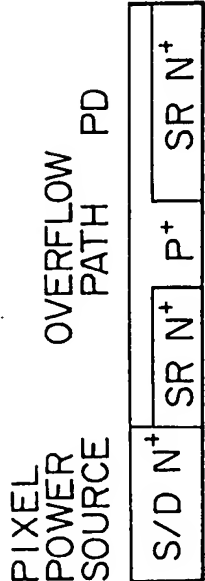


FIG. 6E

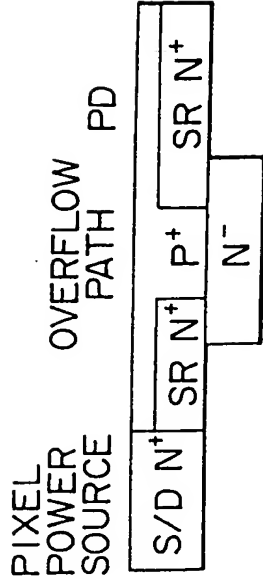
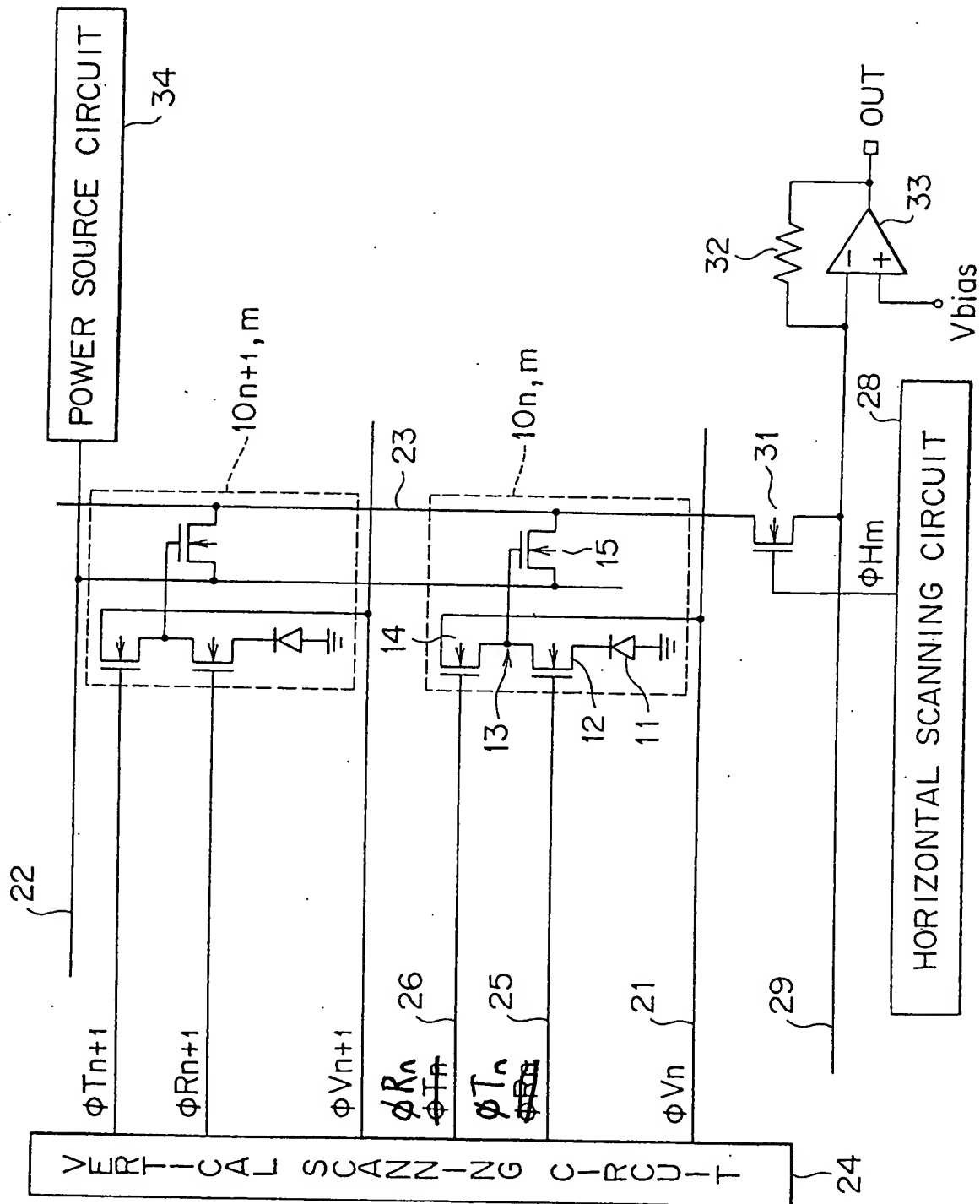


FIG. 7



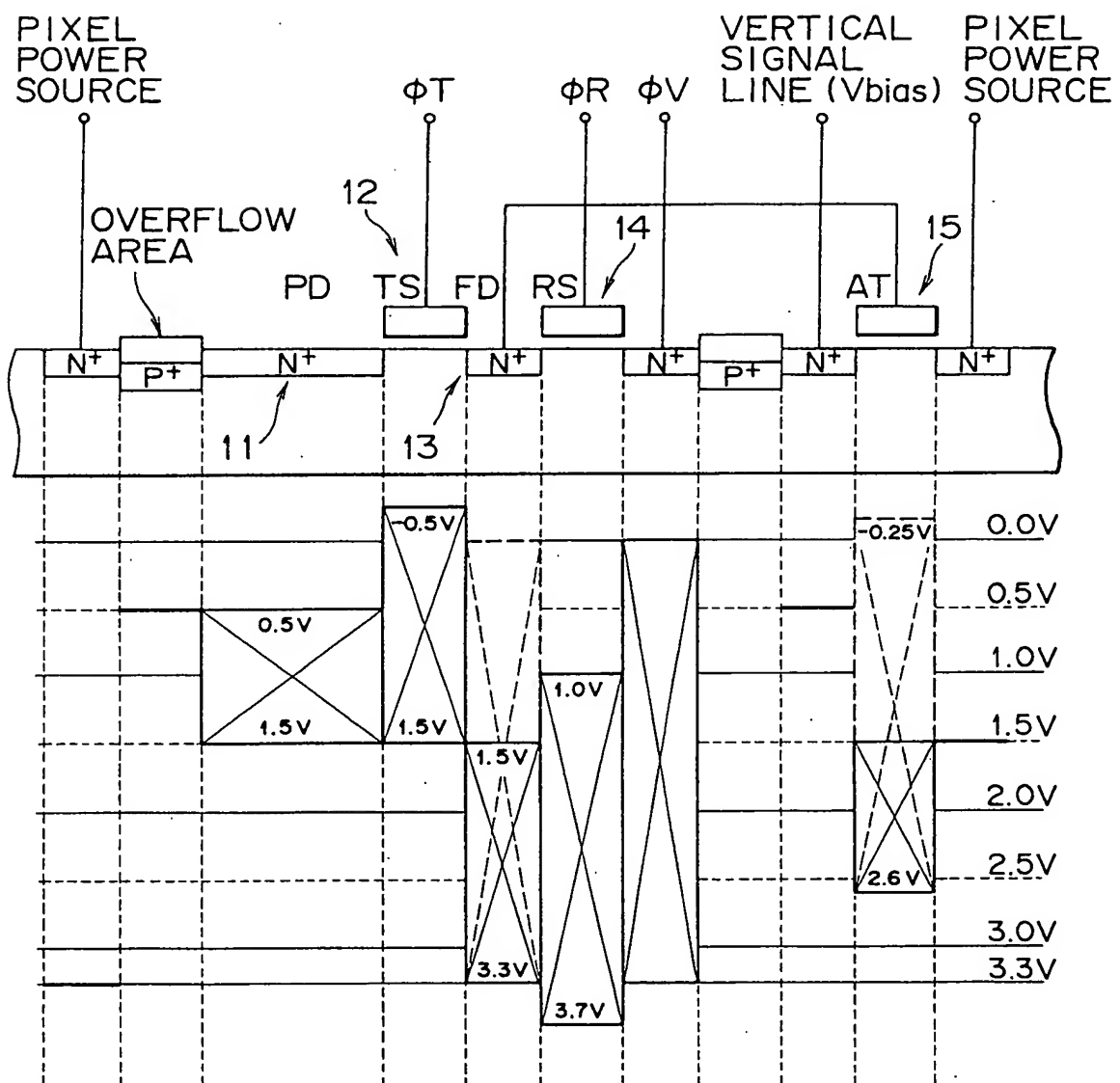
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FIG. 8



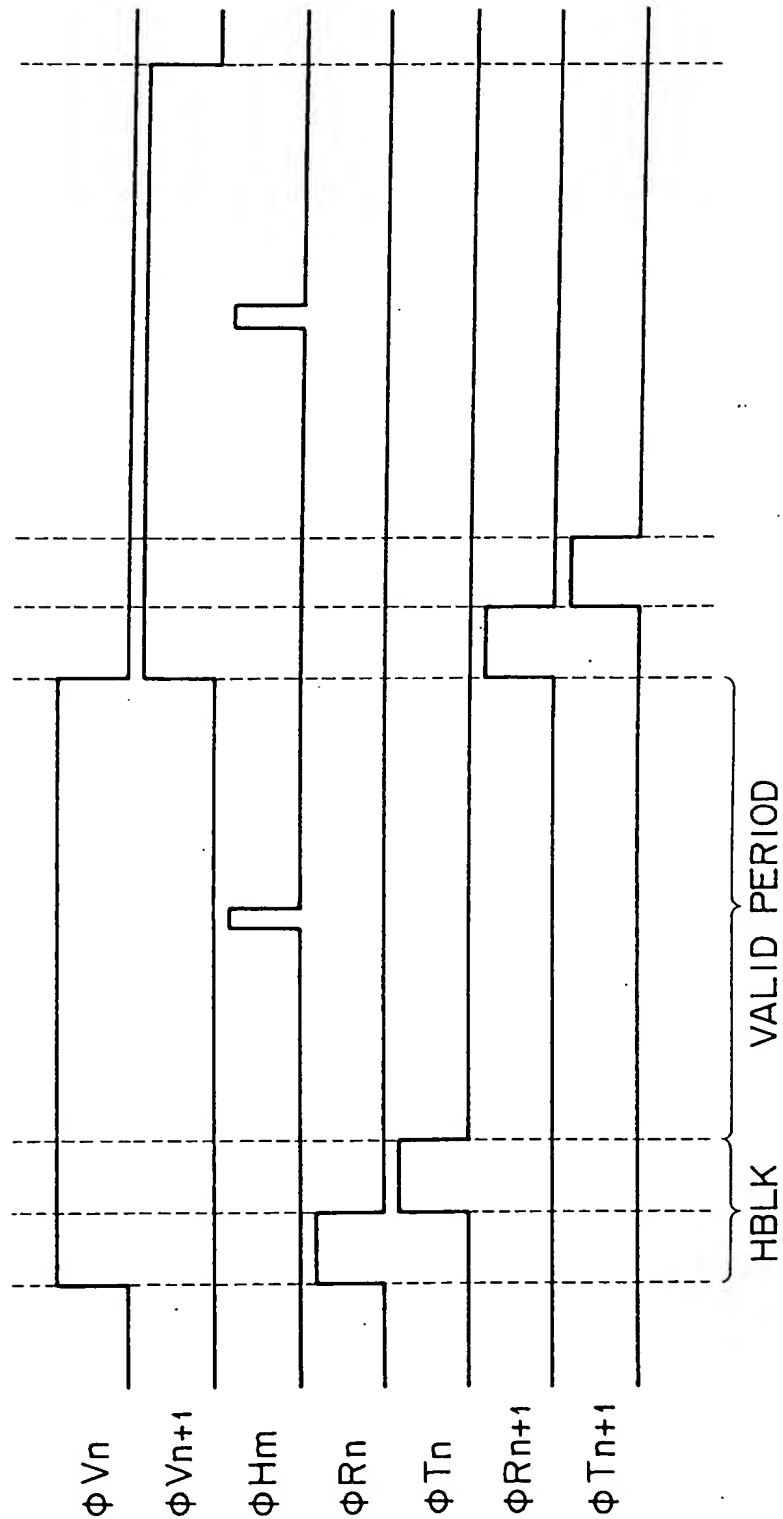


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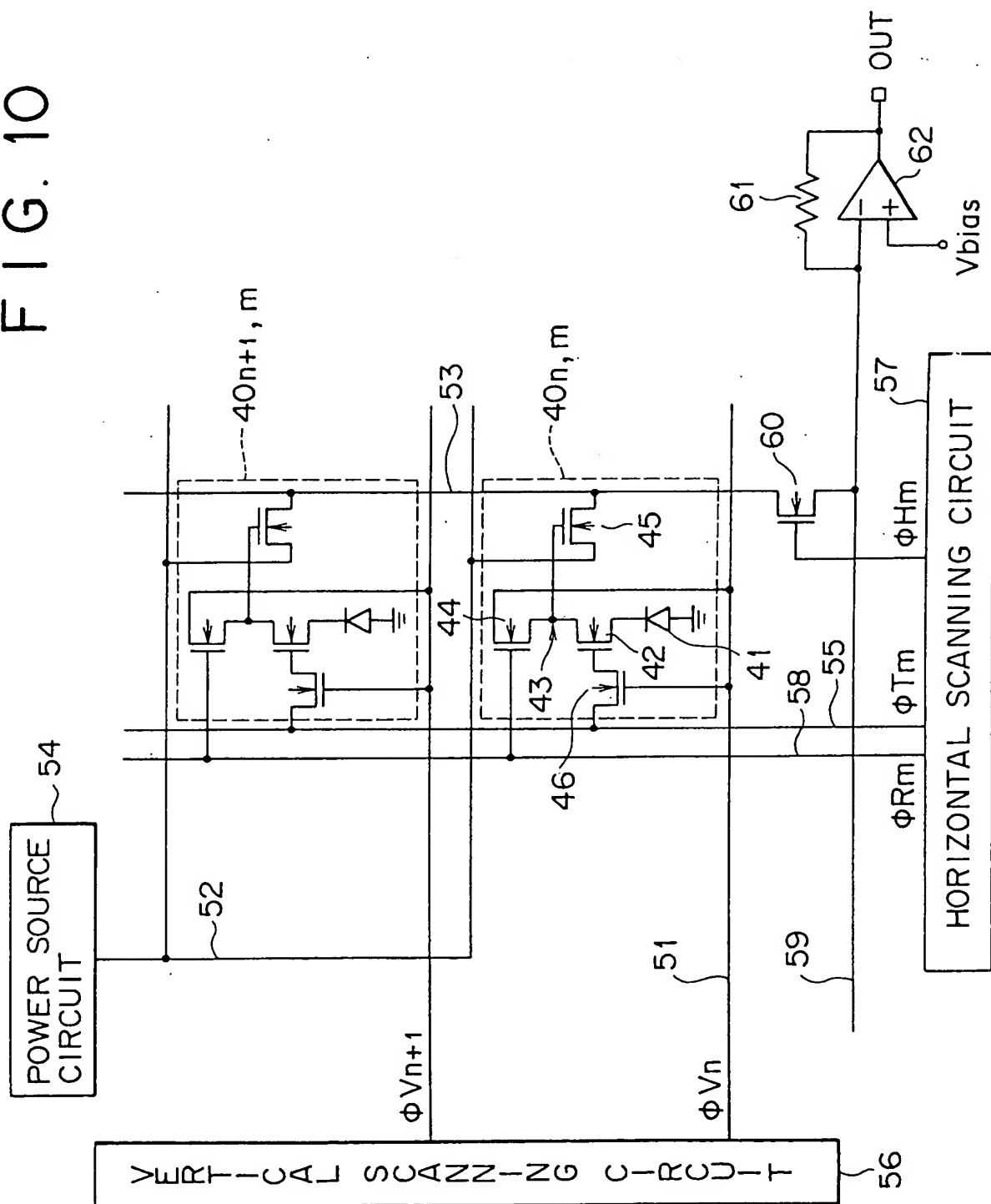
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FIG. 9



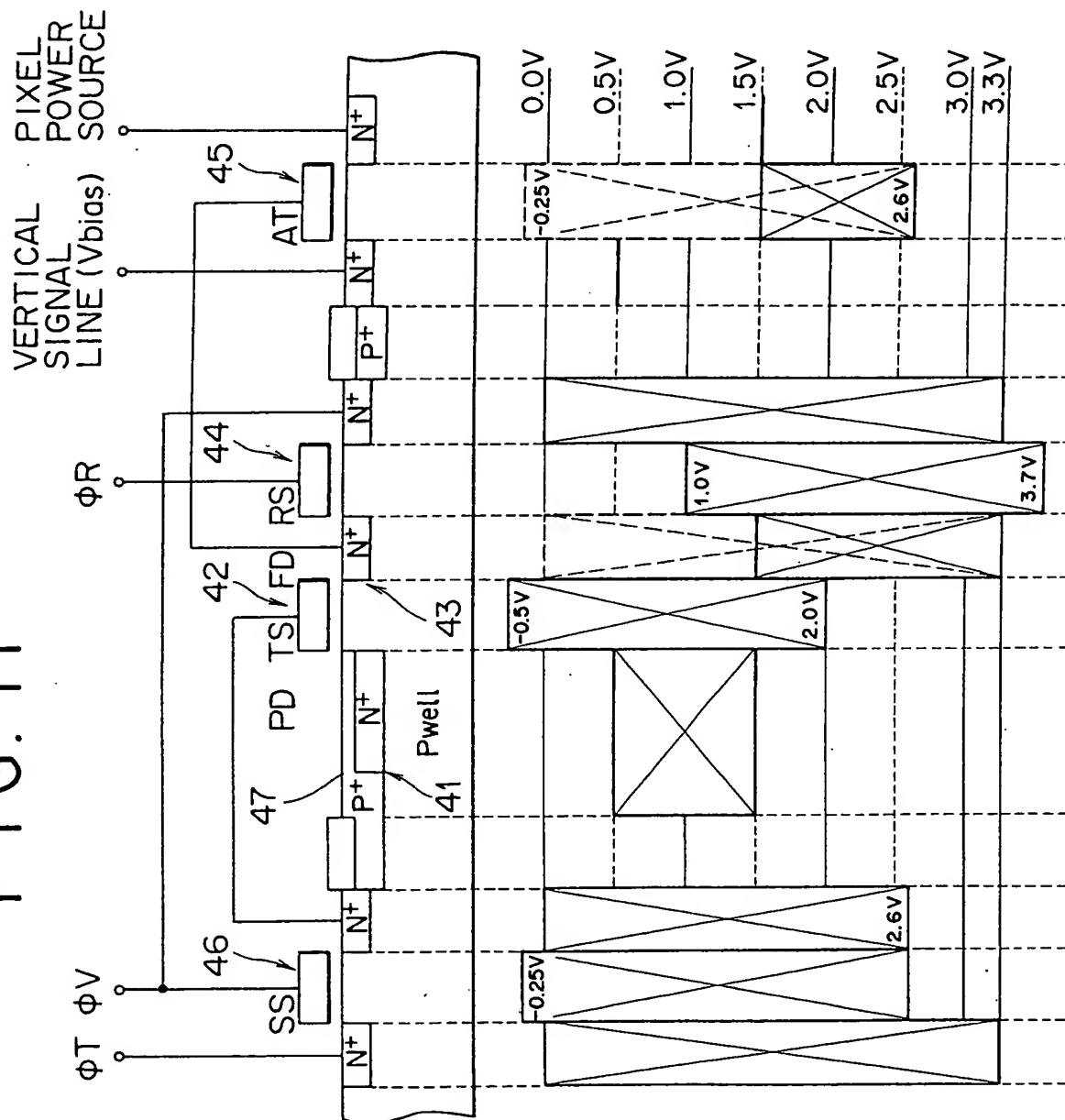
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FIG. 10



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FIG. 11



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FIG. 12

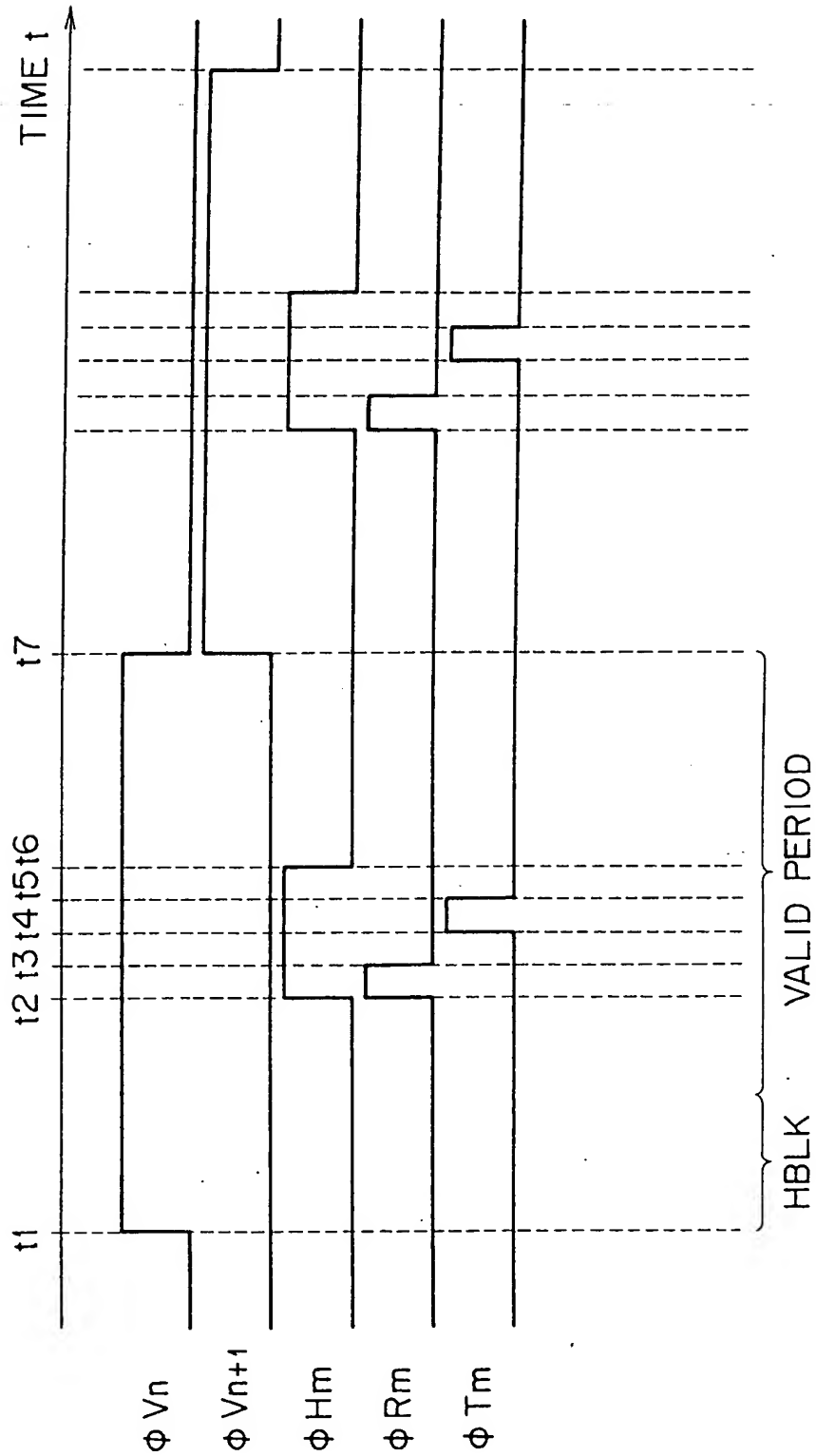


FIG. 13A  $t < t_1$  NON-SELECTION STATE

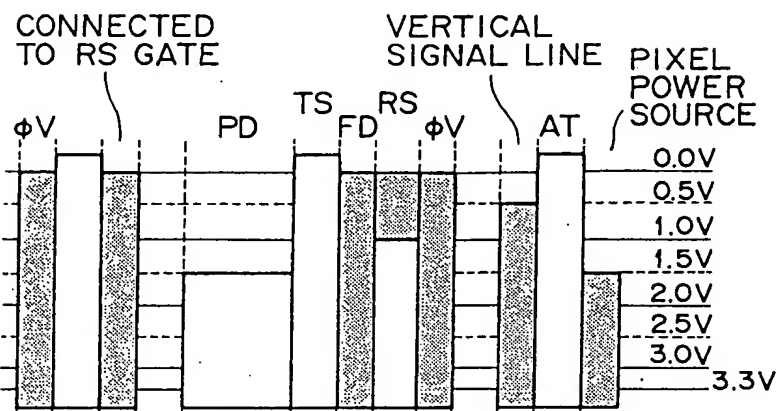


FIG. 13B  $t_1 < t < t_2$  SELECTION

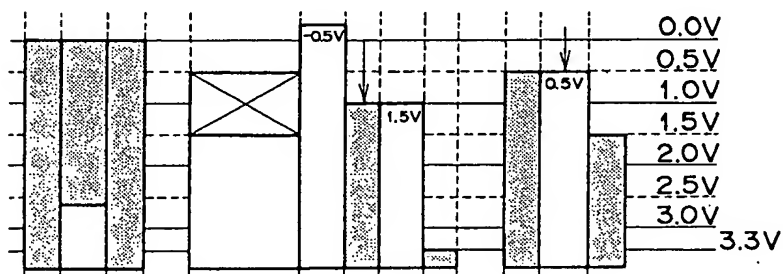


FIG. 13C  $t_2 < t < t_3$  FD RESET

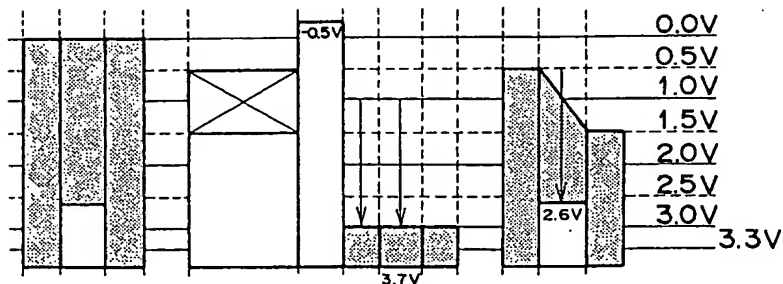


FIG. 13D  $t_3 < t < t_4$  FD RESET

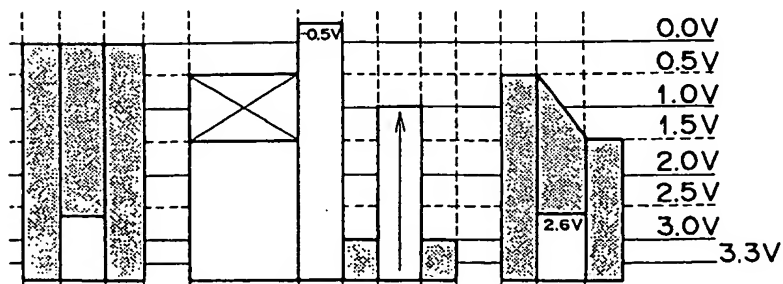


FIG. 14A  $t_4 < t < t_5$  TRANSFER OF STORED CHARGES FROM PD TO FD

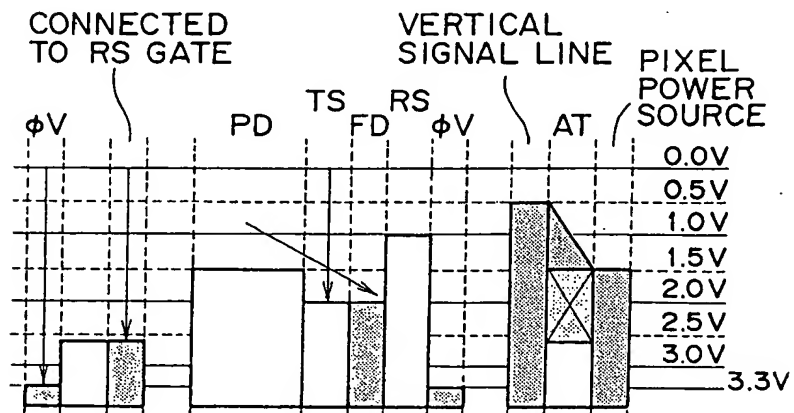


FIG. 14B  $t_5 < t < t_6$  SIGNAL LEVEL READ-OUT

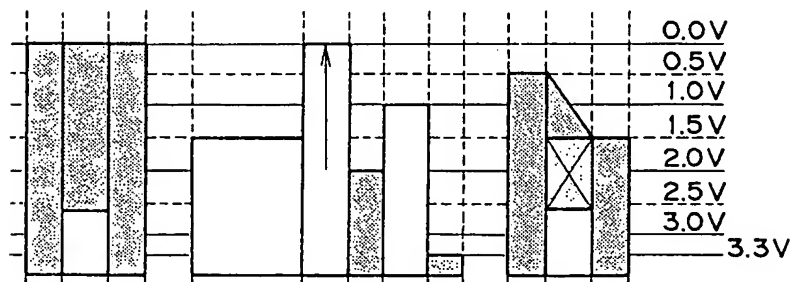
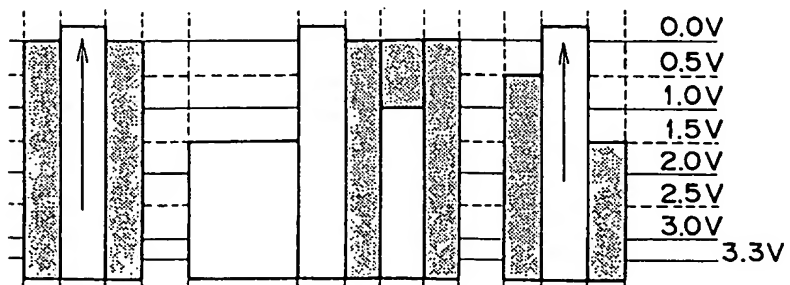


FIG. 14C  $t_7 < t$  NON-SELECTION



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FIG. 15A  $t < t_1$

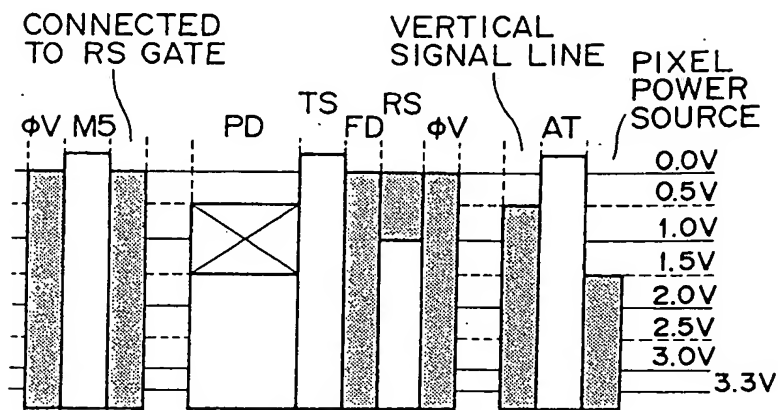


FIG. 15B  $t_1 < t < t_2$

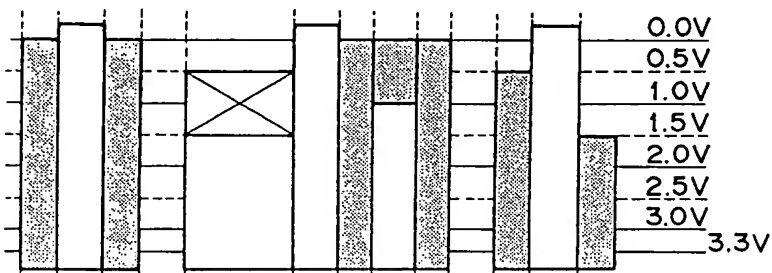


FIG. 15C  $t_2 < t < t_3$

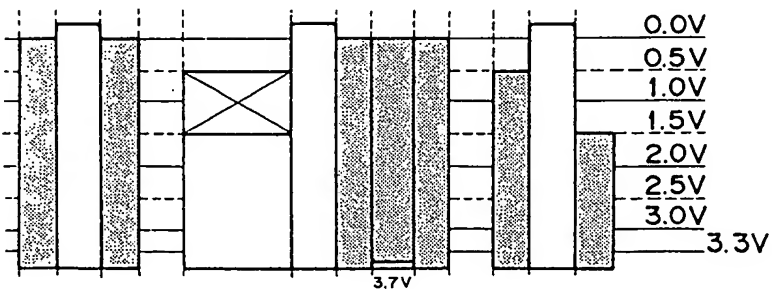
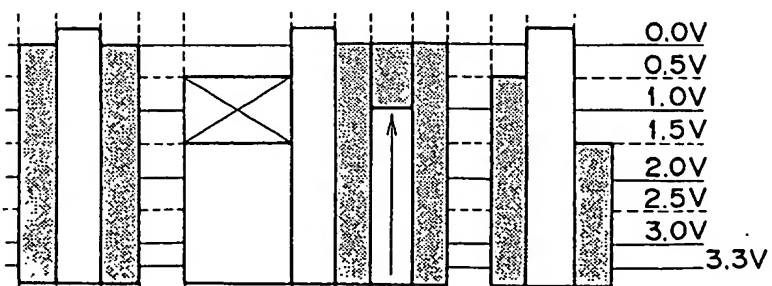


FIG. 15D  $t_3 < t < t_4$



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FIG. 16A  $t_4 < t < t_5$

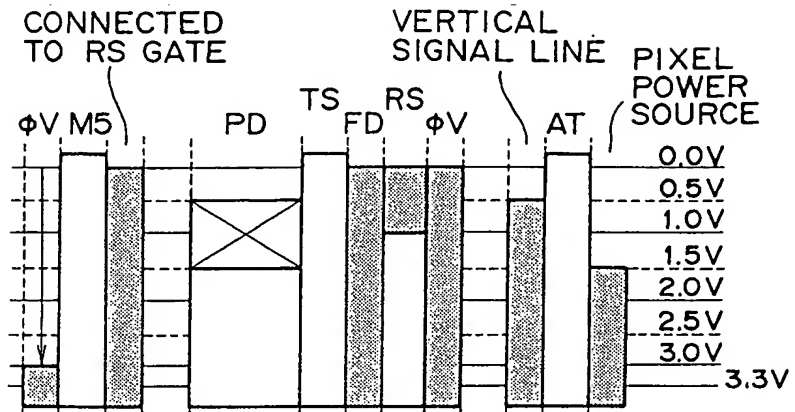


FIG. 16B  $t_5 < t < t_6$

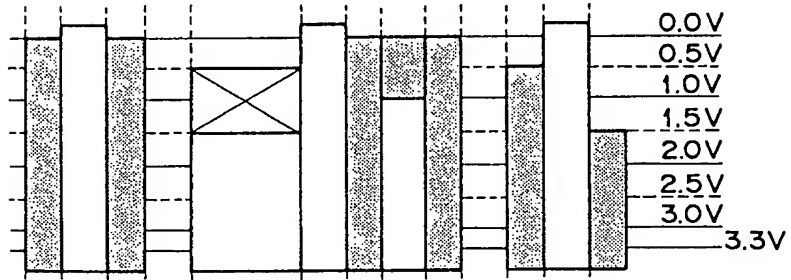
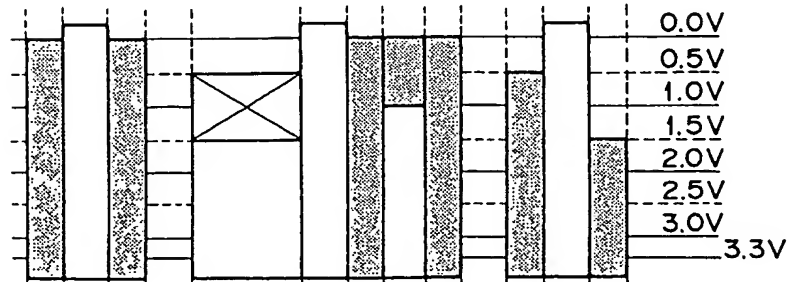


FIG. 16C  $t_7 < t$





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FIG. 17

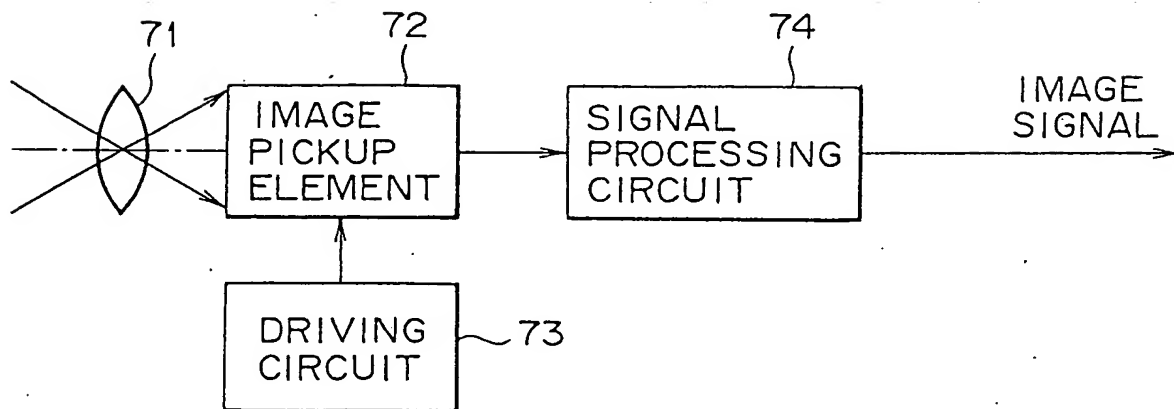


FIG. 18

